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ABSTRACT

The research reported here examines the effectiveness of a social simulation game "Starpower" and discussion model in developing more positive attitudes towards blacks and women. Although "Starpower" has been used extensively throughout the country with numerous groups, there is almost no research evaluating its effectiveness in terms of attitude and/or behavior change related to racism and/or sexism. Freshman and transfer students (N=182) attending Maryland's 1974 New Student Orientation Program were randomly assigned to one of three experimental conditions or a control group. During a two-hour period, the experimental groups played the simulation game followed by a post-game discussion on racism and/or sexism. The control group participated in a social simulation game and discussion unrelated to racism and/or sexism. Experimental subjects, particularly those who discussed both racism and sexism, indicated significantly more positive attitudes toward blacks and more willingness to support black student growth activities. Males who discussed either sexism only or both racism and sexism demonstrated significantly more positive attitudes toward women and men in non-traditional sex roles. (Author/JM)

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SIMULATION GAME EFFECTS ON ATTITUDES REGARDING RACISM AND SEXISM

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SUMMARY

Freshman and transfer students (N=182) attending a New Student Orientation Program were randomly assigned to one of three experimental conditions or a control group. During a two hour period, the experimental groups played the social simulation game Starpower followed by a post-game discussion on racism and/or sexism. The control group participated in a social simulation game and discussion unrelated to racism and/or sexism. Experimental subjects, particularly those who discussed both racism and sexism, indicated significantly more positive attitudes toward blacks and more willingness to support black student growth activities. Males who discussed either sexism only or both racism and sexism demonstrated significantly more positive attitudes toward women (and men) in nontraditional sex roles.

SIMULATION GAME EFFECTS ON ATTITUDES REGARDING RACISM AND SEXISM

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Introduction

Prejudices toward blacks and women exist today, and are more widespread than most Americans realize or are willing to admit. As a microcosm of society, higher educational institutions have not escaped condemnation for their historical and contemporary perpetuation of racism and sexism (Amundsen, 1971; Knowles & Prewitt, 1969; Sedlacek & Brooks, in press). At the same time, they have often been seen as a principal instrument of social reform (Sedlacek & Brooks, in press; Silberman, 1969). Colleges and universities have a responsibility to develop plans and programs designed to eliminate both individual and institutional racism and sexism.

This article is based on the author's doctoral dissertation at the University of Maryland under the direction of Dr. Thomas M. Magoon.

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An appropriate time to begin the task of increasing awareness and sensitivity toward racism and sexism is during the initial orientation of new students. This early introduction to the issues of racism and sexism can potentially effect the attitudes and behaviors of students as they interact in the college or university environment.

A training model for use in new student orientation programs should satisfy several criteria: a) recognize the heterogeneity of interests, backgrounds, and attitudes characteristic of new students; b) arouse interest of the participants; and c) involve the participants in the racism and sexism consciousness-raising process.

Experimental research studies employing a treatment model designed to develop more positive attitudes and/or behavior among whites toward blacks are relatively rare. Some of the more recent techniques which have met with varying success include: bibliotherapy (Alsbrook, 1970); inter-racial confrontation groups (Elenewski, 1972); and films or motion pictures (Shook, 1972). Almost nonexistent are experimental studies designed to modify attitudes or behavior regarding sex roles and sexism.

One relatively unexplored model for developing awareness and sensitivity regarding racism and sexism is the social simulation game. A social simulation game is described by Coleman (1968) as:

> ...a game in which certain social processes are explicitly mirrored in the structure and functioning of the game. The game is a kind of abstraction of these social processes, making explicit certain of them that are ordinarily implicit in our everyday behavior. A social simulation game always consists of a player or players acting in a social environment. By its very definition, it is concerned principally with that part of an individual's environment that consists of other people, groups, and organizations (p. 30).

According to Abt (1970), serious social simulation games offer a rich field for a risk-free, active exploration of serious intellectual and social problems.

The development and use of simulation games have increased rapidly since the mid-1960's. At the same time, research designed to evaluate the effectiveness of simulation games in terms of educational outcomes has lagged behind (Boocock & Schild, 1968; Fletcher, 1971). One area in which social simulation games have demonstrated success is in changing attitudes (Livingston & Stoll, 1972). Studies by Kidder (1971), Kidder and Aubertine (1972), and Livingston (1970, 1971) indicated that playing the social simulation game Ghetto produced more favorable attitudes toward poor people. Weiner and Wright (1973) have reported that children became less prejudiced toward blacks after participating in a social simulation. The social simulation game Starpower was found

to be effective in developing attitude change in understanding and knowledge of minority groups (Yates, Delworth, Hinkle, Peterson, & Hein, 1973). On the other hand, Bean (1972) has indicated that participation in a series of simulation games did not positively influence prejudicial attitudes or behavior toward blacks; but the research was hampered by serious methodological problems which may have affected the results.

The present research examines the effectiveness of a social simulation game, Starpower, and discussion model in developing more positive attitudes toward blacks and women. Although Starpower has been used extensively throughout the country with numerous groups, there is almost no research evaluating its effectiveness in terms of attitude and/or behavior change related to racism and/or sexism.

Method

The subjects were 182 white freshman and transfer students participating in the University of Maryland's 1974 Spring Orientation Program. Of the 182 subjects (84 males, 98 females), there were 42 freshmen and 140 transfer students. The neutral title "Project '74 Workshop" was used for the session in which the study was conducted in order to avoid the establishment of a pre-set regarding the issues of racism and/or sexism. For participation in the Workshop, the subjects were randomly assigned to one of three experimental treatments or a control group.

During a two-hour period, the three experimental

treatments (consisting of two groups per treatment) played the social simulation game Starpower followed by a post-game discussion on racism and/or sexism. The three experimental treatments were differentiated by the content of their post-game discussions, racism (Treatment A), sexism (Treatment B), and both racism and sexism (Treatment C). The experimental treatments (A, B, and C) consisted of 45, 40, and 40 subjects respectively.

Starpower is designed to simulate some of the dynamics of racism and sexism as they occur in "real life". The Starpower manual (Shirts, 1969) briefly describes it as a game:

> ...in which a low mobility, three-tiered society is built through the distribution of wealth in the form of chips. In simulated fashion, the trading of chips creates a society of haves and have-nots. In a game setting which protects against undue abrasion of personal feelings, the group will experience on the one hand an exercise of total power, and on the other hand, the helplessness of those who feel the system working unfairly against them (p. 1).

In addition, Starpower was selected because of practical considerations dictated by the Orientation Program, including: 1) efficiency of time and numbers; i.e. the game could be played and discussed in two hours and by a relatively

large number (24 per group); and 2) the availability of low cost materials.

The post-game discussions focused on the participants' reactions to the game experience and the implications of the game as related to the "real life" social issues of racism and/or sexism. The discussion was based on principles regarding how racism and/or sexism operate, as suggested by Sedlacek and Brooks (in press). Ten specific question areas, adapted from suggested post-game discussion questions provided in the Starpower manual (Shirts, 1969), were developed to emphasize these principles.

The control group (Treatment D) consisted of 57 new freshman and transfer students who for two hours played the social simulation game Meet the Bureaucracy followed by a discussion period, neither of which dealt with the issues of racism and/or sexism. The Meet the Bureaucracy social simulation game is designed to serve as an active learning technique to assist new students in becoming familiar with a college or university's administrative structure through team-solving of simulated problem situations (Dahlberg, 1973). The primary reason for also involving the comparison group in a simulation game was to control for any Hawthorne effect. The game was selected for the control treatment because: 1) it did not deal with the topics of racism and/or sexism; 2) it was thought to have content validity for new students; 3) it could be played and discussed in a two-hour period by a large number of participants; and 4) it had been

used previously with indications of relevance and enjoyment.

The group leaders were all white, male, professional staff members from various Student Affairs offices. Each had prior experience leading small group discussions and familiarity with the issues of racism and sexism. They were randomly assigned to the experimental and control conditions. Each received individual and group training related to either the Starpower game/discussion model or the Meet the Bureaucracy/discussion treatment, as well as receiving a specific set of game and discussion instructions.

Criterion Instruments

Four instruments, administered immediately following the game-discussion models, were used to evaluate the effectiveness of the experimental treatments. These included: 1) the Situational Attitude Scale (SAS); 2) the Situational Attitude Scale for Women (SASW); 3) the Student Activities Fee Survey (SAFS), and 4) the Starpower Evaluation Questionnaire (SEQ).

SAS: This scale was developed by Sedlacek and Brooks (1972) as a measure of racial attitudes of whites toward blacks. The SAS consists of ten personal and social situations which represent instances where race might be a variable in reactions to the situation. For each situation there are ten bipolar semantic differential scales (e.g. good-bad, happy-sad), totaling 100 items. Two forms of the SAS exist. Each form (A and B) contains the same content except that the word "black" has been inserted into each situation in

Form B. This research study used Form B.

The SAS yields ten situation scores which indicate the degree of positive attitudes held by whites toward blacks. In addition, the 100 individual items can be examined separately. Sedlacek and Brooks (1972) indicate that a theoretical model developed by Sakoda, Cohen, and Beall (1954) can be used as a basis for determining the significance of overall group differences. According to this model, out of tests of 100 SAS items, nine would be significant due to chance at the .05 level. Thus, if more items than these are found to be significant, there is support for stating that significant group differences have been obtained. It is important to note, however, that the Sakoda, Cohen, and Beall model is not a precise statistical test and is used only as a "general indicator" in analyzing the significance of overall SAS differences.

The SAS has been previously tested and norms are available for several college student samples. Validity for the SAS is internal and reliability has been measured based on factor analysis.

SASW: This scale was developed by Herman and Sedlacek (1973) and used in this study to measure sexism attitudes, or more specifically, to measure stereotyped attitudes toward women (and men) in nontraditional sex roles. The format of the SASW is similar to the SAS.

Scores for each of the ten situations are not yet available for the SASW. Analysis consists of an examination

of the individual items within each situation and an evaluation of response patterns. An overall evaluation of significant group differences is based on the number of the 100 SASW items which are significant at the .05 level (Sakoda, Cohen, & Beall, 1954). Normative data on the SASW is limited to one previous study which established a measure of internal validity. Reliability information is not yet available for the SASW.

SAFS: This survey was developed for this study to measure support for positive action dealing with racism and/or sexism (i.e. willingness to financially support personal, educational, and cultural growth activities for black and female students). The questionnaire contained ten items, five each related to black and women activities. Respondents were asked to indicate the degree of their support on a 5-point scale ranging from strongly-agree to strongly-disagree. The SAFS was not pre-tested prior to its use in the study.

SEQ: This questionnaire was administered in the experimental treatments as an additional measure of the impact of the Starpower game/discussion model. The questionnaire consisted of 13 items, adapted from a previous study (Yates, et al., 1973), designed to measure participant satisfaction with the game experience, self-perceived attitude change, and anticipated behavior regarding blacks and/or women and the issues of racism and/or sexism.

Two other questionnaires were used in the study. The

Meet the Bureaucracy Evaluation Questionnaire (MTBEQ) was administered to the control group to evaluate the effectiveness of the Meet the Bureaucracy social simulation game. It consisted of six items rated on a 5-point scale (i.e. strongly agree to strongly disagree) and designed to measure participant satisfaction with the game experience, the awareness of potential University-related problem situations, and the influence of the game on confidence and anticipated tactics regarding problem-solving behavior. The Facilitator Feedback Questionnaire (FFQ-S and FFQ-MTB) was constructed to obtain reactions from the game/discussion group leaders as to their perceptions of the treatment impact on the participants and appropriateness for new orientation students.

Analysis

Comparisons between the experimental and control treatments were made using one-way analysis of variance, a post-hoc analysis (Scheffe), and descriptive statistics (frequencies and percentages).[1]

Results and Discussion

Insert Table 1 about here

As seen in Table 1, SAS results indicated that participation in the Starpower game followed by a discussion

[1] Additional materials and summary tables are available from the author.

on racism only (Treatment A) did not produce significantly more positive attitudes toward blacks than participation in the control treatment (i.e. less than 9 of the 100 were significant).

Subjects who played Starpower and discussed racism and sexism (Treatment C) indicated significantly more positive attitudes toward blacks than the control subjects on 10 of the 100 SAS bipolar adjective items. While it could be interpreted that these findings offer support for the claim that, overall, significant differences were obtained between Treatment C and the control treatment, this contention is limited in scope. First, the number of SAS items which were significant was only one better than by chance. It should be remembered that Sakoda, et al. (1954) have presented a theoretical model to be used as a "gauge" of overall significant differences and not as a precise statistical test. Second, 4 of the 10 significant items were clustered within one SAS situation. Third, in terms of situation scores, although the Starpower Treatment C tended to have more positive attitudes toward blacks than the control group on all ten SAS situations, none of the situation scores were significantly different.

The authors of the SAS (Sedlacek & Brooks, 1972) point out that the ten SAS situations are relatively independent of one another and should be considered separately. A basic assumption behind the development of the SAS is the idea that racial attitudes are "situation specific"; i.e.

an individual does not typically have "an attitude" toward blacks, but has many different attitudes depending on the circumstances. This concept is supported by others (Raab & Lipset, 1971). Thus, the clustering of 4 of the 10 significant items within Situation X - Only Person Standing - is noteworthy (see Table 1). One explanation as to why this particular situation stood out is that black and white interaction on a bus (i.e. "blacks to the back") has become a well known and symbolic representation of racial prejudice and the anti-discrimination black protest movement since the 1950's. Thus, this was one situation which the Starpower players could readily identify with and understand in terms of the relationship between discrimination in the game and that which occurs in "real life".

Insert Table 2 about here

Table 2 indicates that, on the SASW, the males who participated in Starpower followed by a discussion on sexism only (Treatment B) had significantly more positive attitudes than the males in the control treatment on 10 of the 100 SASW items. Although there is statistical support for claiming that, overall, the males in the sexism-only Starpower group were significantly more positive than those in the control group, some caution must be exercised in making this claim. The significant items appeared in only 5 of the 10 SASW situations, with the majority clustered

primarily within three situations; i.e. V - Woman Completing Income Tax; VII - Male Nurse; and IX - Woman Job Applicant.

The SASW was developed on the assumption that sexism attitudes, as racial prejudices, are also "situation specific". Of the three SASW situations mentioned above, the responses to Situation V were the most noteworthy (i.e. 4 of the 10 bipolar adjective items were found to be significant). In comparison to the control treatment males, the males in the sexism-only Starpower group indicated that a woman completing their income tax was significantly more credible, useful, and competent. The situation was also seen by the Starpower males as significantly more serious (as opposed to humorous).

In response to Situations VII and IX, in contrast to the control group males, the Starpower Treatment B males viewed an injection by a male nurse as significantly more "in place" and tasteful, while a bright and aggressive woman job applicant was seen as significantly more attractive and provocative (as opposed to undesirable).

Rosencrantz, Vogel, Bee, Broverman, I., and Broverman, D. (1968) indicated that college students have clearly defined sex-role stereotypes. Males like math and are more skilled in business than females, and females are typically non-aggressive, tactful, and gentle. In their responses to Situations V and IX, the males in the Starpower Treatment B demonstrated attitudes that were: 1) more accepting of a woman in an occupational role involving math and business;

and 2) more accepting of aggressive female behavior. Furthermore, the Starpower males responded more favorably to another male filling an occupational role (nurse) which has traditionally been occupied by women.

The males who played Starpower and discussed sexism and racism (Treatment C) were significantly more positive toward women (and men) in nontraditional sex roles than the control group males on 14 of the 100 SASW items. The significant items were spread over 9 of the 10 SASW situations with two or more significant items clustered within five situations: III - Woman Doctor; V - Woman Completing Income Tax; VII - Male Nurse; IX - Woman Job Applicant; and X - Female Counselor.

Three of the same situations which stood out when comparing Starpower Treatment B with those in the control group reappeared as noteworthy when the Treatment C males were compared with the control males; i.e. Situations V, VII, and IX. To the males in this sexism and racism Starpower group, a woman completing their income tax was significantly more serious and useful. A male nurse giving an injection was significantly more tasteful and good. An aggressive, bright woman job applicant was significantly more attractive and an asset. In contrast to the control group males, these males were significantly more jovial (as opposed to angry), confident, and less threatened about being treated by a woman doctor.

At the same time, the males in this sexism and racism

Starpower group also responded favorably regarding an occupational role already considered relatively acceptable for women (i.e. a female counselor) (Herman & Sedlacek, 1973). The males felt significantly more comfortable and elated than the control group males. They also viewed the situation as significantly more serious (as opposed to humorous) and the female counselor as significantly more "in place".

Analysis of the Student Activities Fee Survey (SAFS) indicated that the only significant differences were between the Starpower Treatment C participants and the control treatment. The students in the racism and sexism discussion group showed significantly more support for two of the five items related to the growth and development of blacks: i.e. activities which would provide opportunities for black students to serve and promote the black community; and activities such as lectures, discussions, and films on the cultural heritage of blacks. One explanation is that there appears to be less inferred competition with whites from these two activities than in the other three items, which involve scholarship, financial aid, and educational development services such as academic advising and counseling.

The results from the Starpower Evaluation Questionnaire indicated that, although the Starpower participants generally enjoyed playing the game, they did not feel that their attitudes toward blacks and/or women had changed, nor did they generally believe that their future behavior would

be more supportive of blacks and/or women or more sensitive to the issue of racism and/or sexism.

On the Meet the Bureaucracy Evaluation Questionnaire (MTBEQ), a majority (particularly the males) enjoyed playing the game. A majority of the subjects also agreed that because of the game experience: 1) they now had a better understanding of the kinds of problems they might face at the University; and 2) they now were more likely to seek the office and/or person who could help them solve their problems. Thus, the Meet the Bureaucracy game apparently did have content validity for the participants and effectively controlled for any Hawthorne effect of the Starpower game.

Results from the Facilitator Feedback Questionnaire indicated that the group leaders: 1) felt prepared to facilitate the game and discussion; 2) were able to closely follow the instructions; 3) thought the game and discussion were valuable learning experiences; and 4) would recommend both games for use in future new student orientation programs.

In general, the results from this study indicated that the Starpower game/discussion treatment produced more significant impact on attitudes related to sexism than to racism, particularly among the male participants. There appear to be several possible explanations for this trend. Perhaps sexism as a social issue was less threatening than the issue of racism. Herman and Sedlacek (1973) maintain that, whereas racial stereotyping of blacks is seen as primarily negative, sexual stereotyping of women (and men) carries

with it both negative and positive connotations. Another consideration is that there is less sophistication about sexism than racism. Since the 1950's there has been a concerted effort in America to inform people about racism and to change racial attitudes and/or behaviors, whereas the women's movement has only recently begun to "raise the consciousness" of women and men (Amundsen, 1971; Bem & Bem, 1970; Gornick, 1972; Salzman-Webb, 1971). The less aware individuals are of their attitudes, and, perhaps more importantly, the less knowledgeable about the implications of these attitudes, the less need and time there is to build resistances to change. This may also help to explain why sexist attitudes, expecially among the males, were more susceptible to change following a relatively brief treatment (two hours) than were attitudes toward blacks. Thus, present attitudes and/or behavior regarding sexism and sex roles may be more susceptible to positive change than racial attitudes and/or behavior (i.e. toward blacks) because the sexism issue is less understood and less threatening.

The findings from the study clearly showed that the students who played Starpower and discussed both racism and sexism consistently (although generally not on a significant level) indicated more positive attitudes toward blacks and women and more willingness to support growth activities for blacks and women than did those students who played Starpower and discussed only one issue (i.e. racism or sexism).

While it is possible that diffusing or generalizing

the attitude-change referent may yield greater change, the reverse may also be true. As a result of the random assignment of subjects to the treatment groups, the racism and sexism Starpower group had several black student participants, while, in contrast, the racism-only Starpower treatment did not have any. It may have been that the presence of the black students helped the whites to better comprehend the dynamics of racism which the game simulated. Consequently, the effects of the treatment on racial attitudes and/or behavior of the white students in the racism and sexism Starpower group was greater. Similarly, the presence of females in both the sexism discussion treatments (B and C) may also help to explain why generally more significant sexist than racial attitude differences were noted. Thus, attempts at attitude and/or behavior change regarding racism and/or sexism may be more successful when the individuals one wishes to change interact with those individuals toward whom more positive attitudes and/or behavior are desired (e.g. blacks/females). There is research to support this hypothesis (Amir, 1969; Elenewski, 1972; Yates, et al., 1973).

An interesting pattern emerged when the responses to the Starpower Evaluation Questionnaire were compared with responses to the SAS, SASW, and SAFS. Among the three Starpower treatments, the racism and sexism group indicated (although not significantly) the least amount of enjoyment with the game and discussion experience, and were less

positive regarding self-perceived attitude change and/or anticipated behavior toward women and blacks, respectively.

One implication of the above is that attitude change is often a painful process and may be accompanied by denial in order to resolve the dissonance created by the introduction of new information which is contrary to previously held beliefs or feelings. The amount of denial may be directly proportional to the actual amount of attitude change which has taken place. Another implication for those involved in program evaluation, and in particular, the evaluation of "controversial social issues programming", is that asking participants how much they enjoyed the experience may not be a very accurate or meaningful indication of the real impact of the game.

This research represents the only known effort to experimentally evaluate the effectiveness of the Starpower game/discussion model on any educational objectives, including changing attitudes and/or behavior regarding racism and sexism. In general, the findings from the study are mixed but encouraging in that a relatively brief encounter with the Starpower game/discussion treatment by non-volunteers did stimulate consistent patterns of more positive attitudes and supportive behavior toward blacks and women. Subsequent research will permit future researchers and program planners to more adequately assess the differential effectiveness and generality of the Starpower game/discussion model.

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TABLE 1

SAS Individual Item Scores

Post-Hoc Analysis of Significant F Values*

Situations and Bipolar Adjective Dimensions	Treatment	
	A vs D	C vs D
I. New Black Family Next Door		
9 desirable-undesirable	0.08	5.24
II. Black Man Raped White Woman		
18 injure-kill	2.18	11.68
V. Friend Becomes Engaged to Black		
50 disgusting-pleasing	0.35	5.33
VI. Stopped by Black Policeman		
55 tolerant-intolerant	8.12	7.75
VIII. Black Youngster Steals		
80 hopeful-hopeless	1.09	7.71
IX. Campus Demonstration by Blacks		
81 bad-good	0.11	4.60
X. Only White Person Standing on Bus with Blacks		
92 tolerable-intolerable	0.32	5.04
94 important-trivial	0.67	7.35
97 indignant-understanding	3.01	9.71
100 not resentful-resentful	0.51	6.76

* All F values larger than 4.60 are significant beyond .10 (Scheffe).

TABLE 2

SASW Individual Item Scores (Males)

Post-Hoc Analysis of Significant F Values*

Situations and Bipolar Adjective Dimensions	Treatment	
	B vs D	C vs D
III. Woman Doctor Treats You		
23 angry-jovial	5.65	10.02
27 confident-not confident	3.88	5.45
30 threatened-neutral	1.92	5.58
IV. Female Co-worker Gets Your Job		
36 unreasonable-reasonable	6.16	1.57
V. Woman Completes Your Income Tax		
43 incredible-credible	6.76	0.93
44 useful-useless	7.90	8.58
45 competent-incompetent	10.61	0.69
50 humorous-serious	6.80	8.59
VII. Male Nurse Gives You an Injection		
65 out of place-in place	14.83	3.47
67 distasteful-tasteful	8.77	7.53
69 good-bad	4.58	9.99
VIII. Girlfriend Picks Up Check		
76 hurt-not hurt	2.15	9.51
IX. You Interview a Bright and Aggressive Woman Job Applicant		
85 provocative-undesirable	5.32	4.33
86 unattractive-attractive	4.90	14.19
88 problem-asset	3.80	6.03
X. You Meet Your Female Counselor		
93 uncomfortable-comfortable	1.29	9.57
96 disappointed-elated	1.71	5.76
98 humorous-serious	3.84	9.19
99 out of place-in place	2.55	10.55

* All F values larger than 4.78 are significant beyond .10 (Scheffe).